

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of the claims in this application:

1-45 (Canceled).

46. (Previously presented) A composition for the removal of etch residues from integrated circuits using copper materials, which consists essentially of:

a choline compound;

water; and

an organic solvent selected from the group consisting of dimethyl sulfoxide, dimethyl acetamide, ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, propylene glycol alkyl ether, N-methyl pyrrolidone, ethylene diamine, ethylene triamine, monoethanolamine, and diglycolamine.

47. (Previously presented) The composition of claim 46 in which the composition consists essentially of from about 10 percent by weight to about 50 percent by weight of the choline compound; from about 10 percent by weight to about 80 percent by weight of water; and from about 20 percent by weight to about 80 percent by weight of the organic solvent.

48. (Previously presented) A composition for the removal of etch residues from integrated circuits using copper materials, which consists essentially of:

a choline compound;

water;

hydroxylamine or hydroxylamine salt; and

an organic solvent selected from the group consisting of dimethyl sulfoxide, dimethyl acetamide, ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, propylene glycol alkyl ether, N-methyl pyrrolidone, ethylene diamine, ethylene triamine, monoethanolamine, and diglycolamine.

49. (Currently amended) A composition for the removal of etch residues from integrated circuits using copper materials, which consists essentially of:

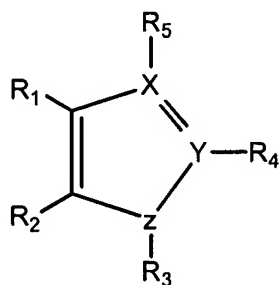
a choline compound;

water;

an organic solvent selected from the group consisting of dimethyl sulfoxide, dimethyl acetamide, ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, propylene glycol alkyl ether, N-methyl pyrrolidone, ethylene diamine, ethylene triamine, monoethanolamine, and diglycolamine; and

from about 0.5% by weight to about 5% by weight of a corrosion inhibitor selected from the group consisting of:

compounds of the general class

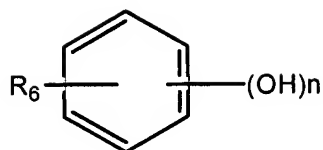


where X, Y, and Z, are chosen from C, N, O, S, and P; and

where pendant R groups R₁-R₅ are chosen from H, a substituted C₁-C₆ straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group,~~ amidyl group, hydroxyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, and sulfonic acid group;

salts of said compounds of the general class;

hydroxybenzene compounds of the general class



where $n = 1-4$, and

where R_6 is present from 2 to 5 times and is chosen from H, a substituted C_1-C_6 straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group~~, amidyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, sulfonic acid group; and salts of said hydroxybenzene compounds.

50. (Previously presented) The composition of claim 49, wherein X is nitrogen, Y is nitrogen, Z is carbon, and R_1-R_5 are hydrogen.

51. (Previously presented) The composition of claim 49, wherein X, Y, and Z are nitrogen, R_3 is hydrogen, and R_4 and R_5 constitute a benzene ring.

52. (Previously presented) The composition of claim 49, wherein the corrosion inhibitor is selected from the group consisting of catechol, t-butyl catechol, gallic acid, and benzotriazole.

53. (Previously presented) The composition of claim 49, wherein the choline compound is choline hydroxide or a choline salt.

54. (Previously presented) The composition of claim 48, wherein the choline compound is choline hydroxide or a choline salt.

55. (Previously presented) The composition of claim 46, wherein the choline compound is choline hydroxide or a choline salt.

56. (Previously presented) A composition for stripping photoresist from integrated circuits using copper materials and low k dielectric materials consisting essentially of:

a choline compound;

from about 2 to about 12% by weight of hydroxylamine or hydroxylamine salt; and
water.

57. (Previously presented) The composition of claim 56, wherein the choline compound is choline hydroxide or a choline salt.

58. (Previously presented) A composition for stripping photoresist from integrated circuits using copper materials and low k dielectric materials consisting essentially of:

a choline compound;

from about 2 to about 12% by weight of hydroxylamine or hydroxylamine salt;
water; and

an organic solvent selected from the group consisting of dimethyl acetamide, dimethyl sulfoxide, propylene glycol, dipropylene glycol monomethyl ether, N-methyl pyrrolidone, and cyclohexyl pyrrolidone.

59. (Previously presented) The composition of claim 58, wherein the choline compound is choline hydroxide or a choline salt.

60. (Currently amended) A composition for the removal of etch residues from integrated circuits using copper materials and low k dielectric materials consisting essentially of:

a choline compound;

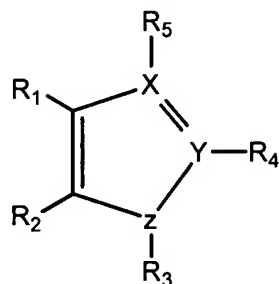
water;

from about 2 to about 12% by weight of hydroxylamine or hydroxylamine salt;

an organic solvent selected from the group consisting of dimethyl sulfoxide, dimethyl acetamide, ethylene glycol, ethylene glycol alkyl ether, diethylene glycol alkyl ether, triethylene glycol alkyl ether, propylene glycol, propylene glycol alkyl ether, N-methyl pyrrolidone, ethylene diamine, ethylene triamine, monoethanolamine, and diglycolamine; and

from about 0.5% by weight to about 5% by weight of a corrosion inhibitor selected from the group consisting of :

compounds of the general class

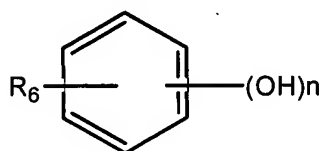


where X, Y, and Z, are chosen from C, N, O, S, and P; and

where pendant R groups R₁-R₅ are chosen from H, a substituted C₁-C₆ straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group,~~ amidyl group, hydroxyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, and sulfonic acid group;

salts of said compounds of the general class;

hydroxybenzene compounds of the general class



where n= 1-4, and

where R₆ is present from 2 to 5 times and is chosen from H, a substituted C₁-C₆ straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group,~~ amidyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, sulfonic acid group; and

salts of said hydroxybenzene compounds.

61. (Previously presented) The composition of claim 60, wherein X is nitrogen, Y is nitrogen, Z is carbon, and R₁-R₅ are hydrogen.

62. (Previously presented) The composition of claim 60, wherein X, Y, and Z are nitrogen, R₃ is hydrogen, and R₄ and R₅ constitute a benzene ring.

63. (Previously presented) The composition of claim 60, wherein the corrosion inhibitor is selected from the group consisting of catechol, t-butyl catechol, gallic acid, and benzotriazole.

64. (Previously presented) The composition of claim 60, wherein the choline compound is choline hydroxide or a choline salt.

65. (Currently amended) A composition for stripping photoresist from integrated circuits using copper materials and low k dielectric materials consisting essentially of:

a choline compound;

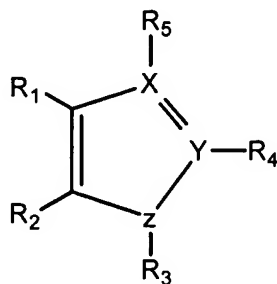
water;

from about 2 to about 12% by weight of hydroxylamine or hydroxylamine salt;

an organic solvent selected from the group consisting of dimethyl acetamide, dimethyl sulfoxide, propylene glycol, dipropylene glycol monomethyl ether, N-methyl pyrrolidone, and cyclohexyl pyrrolidone; and

from about 0.5% by weight to about 5% by weight of a corrosion inhibitor selected from the group consisting of:

compounds of the general class

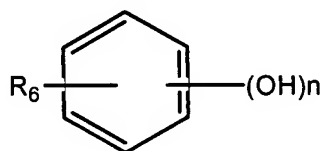


where X, Y, and Z, are chosen from C, N, O, S, and P; and

where pendant R groups R_1 - R_5 are chosen from H, a substituted C_1 - C_6 straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group~~, amidyl group, hydroxyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, and sulfonic acid group;

salts of said compounds of the general class;

hydroxybenzene compounds of the general class



where $n = 1-4$, and

where R_6 is present from 2 to 5 times and is chosen from H, a substituted C_1 - C_6 straight, branched or cyclo alkyl, alkenyl or alkynyl group, straight or branched alkoxy group, a substituted acyl group, ~~straight or branched alkoxy group~~, amidyl group, a halogen, carboxyl group, alkoxyalkyl group, alkylamino group, alkylsulfonyl group, sulfonic acid group; and salts of said hydroxybenzene compounds.

66. (Previously presented) The composition of claim 65, wherein X is nitrogen, Y is nitrogen, Z is carbon, and R_1 - R_5 are hydrogen.

67. (Previously presented) The composition of claim 65, wherein X, Y, and Z are nitrogen, R_3 is hydrogen, and R_4 and R_5 constitute a benzene ring.

68. (Previously presented) The composition of claim 65, wherein the corrosion inhibitor is selected from the group consisting of catechol, t-butyl catechol, gallic acid, and benzotriazole.

69. (Previously presented) The composition of claim 65, wherein the choline compound is choline hydroxide or a choline salt.

70. (Previously presented) A composition for the removal of etch residues from integrated circuits using copper materials and low k dielectric materials consisting essentially of:
a choline compound and
water.

71. (Previously presented) The composition of claim 70, wherein the choline compound is choline hydroxide or a choline salt.

72. (Previously presented) A composition for stripping photoresist from integrated circuits using copper materials and low k dielectric materials consisting essentially of:
a choline compound and
water.

73. (Previously presented) The composition of claim 72, wherein the choline compound is choline hydroxide or a choline salt.